RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number: 10/552,686

Source: PU110

Date Processed by STIC: 10/24/05

ENTERED

PCT

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        3 <110> APPLICANT: CropDesign N.V.
        5 <120> TITLE OF INVENTION: Stress Tolerance
        7 <130> FILE REFERENCE: CD-088-PCT
C-->    9 <140> CURRENT APPLICATION NUMBER: US/10/552,686
C-->    9 <141> CURRENT FILING DATE: 2005-10-11
        9 <150> PRIOR APPLICATION NUMBER: EP 03076064.9
       10 <151> PRIOR FILING DATE: 2003-04-11
       12 <160> NUMBER OF SEQ ID NOS: 10
       14 <170> SOFTWARE: PatentIn version 3.2
       16 <210> SEQ ID NO: 1
       17 <211> LENGTH: 1344
       18 <212> TYPE: DNA
       19 <213> ORGANISM: Beta vulgaris
       22 <220> FEATURE:
       23 <221> NAME/KEY: misc_feature
       24 <222> LOCATION: (3)..(3)
       25 <223> OTHER INFORMATION: n is a, c, g, or t
       27 <400> SEQUENCE: 1
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       29 cagtttctct ctcctcgaaa tcctaattct ctctgctcaa atccctaatt ctctctcctc   120
       30 acgatcgtag agtctctgtt tttcactgta taaatctatt caaacaattt tctctctcct   180
       31 attatttcaa tttcggtttg ctaattcaag gtgaatcaaa tgtcggcaaa tatgttttcc   240
       32 agactttttg gtgctaaatc tcgtgatgca gctactactg agactacttt atctacatta   300
       33 gagaaattga atgagacact tgaaatgcta gagaagaaag agcagcttct aatgaaaaag   360
       34 gctactgcag aggttgaaaa ggccaaagag ttcacaaggg caaagaataa acgtgctgct   420
       35 atacaatgtt taaagaggaa aaggttatac gaacagcaag tcgagcaggt tgggaatttt   480
       36 caactacgaa ttcatgatca gatcataatg cttgattctg caaaagcaac gacagagaca   540
       37 gttgctgcat tgagatctgg tgctagtgct atgaaggcta tgcagaaagc aacaaacatt   600
       38 gatgatgtgg acaagacaat ggatgagatc aatgagcaga ccgataactt gagacagata   660
       39 caggaggcac tagctactcc tgttggtgca actgattttg atgaggatga attggaagct   720
       40 gagcttgaag aacttgaagg agctgagttg gaggaacaac ttctacaacc atttacaact   780
       41 gcccctacgg caccaattca tgttccagaa ggcaagctgc cagcaaggcc aacaccccaa   840
       42 aagaactctg aggaagatga actcgctgcg ttacaagcag aaatggcact ttgaaggctt   900
       43 ttctttttttc atgtttataa tcatgtccca aagaaatgga aacgggctgg aaaaaggaaa   960
       44 aggcaaagga aaagaaaagg aaaagaaaaa gattgaaaat ctttattgat tgatggtggt  1020
       45 atatttaagt attgagtgtt gatagcatct tgttgtcatg tactatatgc ctatatggag  1080
       46 tacctgttat taattggtaa tgttaatgca aatattgtct ataccattga tgaacaaaga  1140
       47 tgggggctgt aaactcttgg ttgttttttc gttttcaat tttttgtttt cgtttttatt  1200
       48 tttcagtcac ctactggttc tagtgactgg tgacaattgc tgtacagaga ttttgttgca  1260
       49 cttgagctgc tggtcaacag actatgcaga ctgtcagatt tataaaatca gaaagctggc  1320
       50 aaaaaaaaaa aaaaaaaact cgag                                           1344
       52 <210> SEQ ID NO: 2
       53 <211> LENGTH: 224
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55 <213> ORGANISM: Beta vulgaris
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59 1               5                   10                  15
61 Ala Ala Thr Thr Glu Thr Thr Leu Ser Thr Leu Glu Lys Leu Asn Glu
62          20                  25                  30
64 Thr Leu Glu Met Leu Glu Lys Lys Glu Gln Leu Leu Met Lys Lys Ala
65          35                  40                  45
67 Thr Ala Glu Val Glu Lys Ala Lys Glu Phe Thr Arg Ala Lys Asn Lys
68      50                  55                  60
70 Arg Ala Ala Ile Gln Cys Leu Lys Arg Lys Arg Leu Tyr Glu Gln Gln
71 65                  70                  75                  80
73 Val Glu Gln Val Gly Asn Phe Gln Leu Arg Ile His Asp Gln Ile Ile
74              85                  90                  95
76 Met Leu Asp Ser Ala Lys Ala Thr Thr Glu Thr Val Ala Ala Leu Arg
77              100                 105                 110
79 Ser Gly Ala Ser Ala Met Lys Ala Met Gln Lys Ala Thr Asn Ile Asp
80          115                 120                 125
82 Asp Val Asp Lys Thr Met Asp Glu Ile Asn Glu Gln Thr Asp Asn Leu
83      130                 135                 140
85 Arg Gln Ile Gln Glu Ala Leu Ala Thr Pro Val Gly Ala Thr Asp Phe
86 145                 150                 155                 160
88 Asp Glu Asp Glu Leu Glu Ala Glu Leu Glu Glu Leu Glu Gly Ala Glu
89              165                 170                 175
91 Leu Glu Glu Gln Leu Leu Gln Pro Phe Thr Thr Ala Pro Thr Ala Pro
92              180                 185                 190
94 Ile His Val Pro Glu Gly Lys Leu Pro Ala Arg Pro Thr Pro Gln Lys
95          195                 200                 205
97 Asn Ser Glu Glu Asp Glu Leu Ala Ala Leu Gln Ala Glu Met Ala Leu
98      210                 215                 220
100 <210> SEQ ID NO: 3
101 <211> LENGTH: 1341
102 <212> TYPE: DNA
103 <213> ORGANISM: Beta vulgaris
105 <220> FEATURE:
106 <221> NAME/KEY: misc_feature
107 <222> LOCATION: (934)..(934)
108 <223> OTHER INFORMATION: n is a, c, g, or t
110 <400> SEQUENCE: 3
111 cccgcctgca ggaattcggc acgagagaaa acctgtctta tacttctcta ctttgctttt      60
112 ttgttttggt tagccaacca atctaaccca gaattgataa tcccactctt caattccctc     120
113 aaaatttttc ttccaaaatt catttccact attttcagat atttcatcac taaaatctcc     180
114 tcgagttaac ctaatcactc cattcttatt tcctctcgga aaaaaaccta atcaatcaac     240
115 tttacgcggt ttcattctcc gatctttttc gtttcctcgt aatttttttag cgatcaccca     300
116 ttttcgttaa atatgtttac aagggttttc ggtaaaccta aggaaggaac aacgagtgct     360
117 gttgcaacgt tagacaaatt gagtgagaca ctcgaaatgt tggaaaaaaa agaacaggtg     420
118 cttttgaaga aggctggtgc tgaggttgaa aaggccaagg agttcactag agcaaagaac     480
119 aaacgtgctg ctataacttg tctgaagagg aagaggctat acgaacaaca aatagagcag     540
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      120 cttggaaaca tgcagttgcg aattcatgat cagatgatac tgcttgaagg ggcaaaggca    600
      121 acaacagaga ctgtcgatgc attgaggtct ggtgcctcgg ctatgaaggc catgcaaaag    660
      122 gcaacaaaca tcgataatgt ggataaaact atggacgaga tcaatgagca gacagagaac    720
      123 ttaaaacaaa tacaggaagc tctctctgct ccaatcggtg cagcagctga cttttgatga    780
      124 ggatgacctg aaagcagagc ttgaagagct agaaggtgct gaattgaaga agcaacttat    840
      125 cagcccagct actactgctc ctgctgcacc agtgcatgct cctgctggaa aacaacctga    900
W-->  126 cgcccctgca cctcgggaag aatactgctt gaanaggatg agctcgccgc gttgcaagca    960
      127 gagatggccc ctgtaaaaag tttttctgga ctggaataca ggagttggtc ttacatcaaa   1020
      128 gtagctgtat aataagctaa ttattattgc tttgggtacc acctttacag gcacgtatta   1080
      129 cccaatcacg gatatttggt aataaaatgt gctgtgtagg ttgcgtgatg ttgttgatta   1140
      130 ggccgtagtt ctccttgtgc caggtcttga ttgcacctta ttctcgatgt aaatttcaga   1200
      131 ttctcttata gacattgtaa tttgtgacaa aatatcgatc atttggtacg agttaaccct   1260
      132 tcacatatgt aaaagaaata aaatacaatt cttgtatgac tttatttaa ccaaaaaaaa   1320
      133 aaaaaaaaaa aactcgaggg g                                           1341
      135 <210> SEQ ID NO: 4
      136 <211> LENGTH: 154
      137 <212> TYPE: PRT
      138 <213> ORGANISM: Beta vulgaris
      140 <400> SEQUENCE: 4
      141 Met Phe Thr Arg Val Phe Gly Lys Pro Lys Glu Gly Thr Thr Ser Ala
      142 1               5                   10                  15
      144 Val Ala Thr Leu Asp Lys Leu Ser Glu Thr Leu Glu Met Leu Glu Lys
      145                 20                  25                  30
      147 Lys Glu Gln Val Leu Leu Lys Lys Ala Gly Ala Glu Val Glu Lys Ala
      148         35                  40                  45
      150 Lys Glu Phe Thr Arg Ala Lys Asn Lys Arg Ala Ala Ile Thr Cys Leu
      151     50                  55                  60
      153 Lys Arg Lys Arg Leu Tyr Glu Gln Gln Ile Glu Gln Leu Gly Asn Met
      154 65                  70                  75                  80
      156 Gln Leu Arg Ile His Asp Gln Met Ile Leu Leu Glu Gly Ala Lys Ala
      157                 85                  90                  95
      159 Thr Thr Glu Thr Val Asp Ala Leu Arg Ser Gly Ala Ser Ala Met Lys
      160                 100                 105                 110
      162 Ala Met Gln Lys Ala Thr Asn Ile Asp Asn Val Asp Lys Thr Met Asp
      163         115                 120                 125
      165 Glu Ile Asn Glu Gln Thr Glu Asn Leu Lys Gln Ile Gln Glu Ala Leu
      166     130                 135                 140
      168 Ser Ala Pro Ile Gly Ala Ala Ala Asp Phe
      169 145                 150
      171 <210> SEQ ID NO: 5
      172 <211> LENGTH: 1019
      173 <212> TYPE: DNA
      174 <213> ORGANISM: Beta vulgaris
      176 <220> FEATURE:
      177 <221> NAME/KEY: misc_feature
      178 <222> LOCATION: (5)..(5)
      179 <223> OTHER INFORMATION: n is a, c, g, or t
      181 <220> FEATURE:
      182 <221> NAME/KEY: misc_feature
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RAW SEQUENCE LISTING   DATE: 10/24/2005
PATENT APPLICATION: US/10/552,686   TIME: 10:48:44

Input Set : **A:\Sequence Listing.txt**
Output Set: **N:\CRF4\10242005\J552686.raw**

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183 <222> LOCATION: (1001)..(1001)
184 <223> OTHER INFORMATION: n is a, c, g, or t
186 <400> SEQUENCE: 5
W--> 187 cccgnctgca ggaattcggc acgagcgatc tccccaattc tccttctctc aaagatggga      60
     188 aacaccgaga aactaatgaa ccagatcatg gagctcaaat tcacctctaa atcacttcaa     120
     189 cgtcaatctc gtaagtgcga gaaagaagaa aaagctgaga aactcaaagt caagaaagca     180
     190 atcgagaaag gaaacatgga tggagctcga atttacgccg aaaacgcaat tcgtaagcgt     240
     191 actgaacaga tgaactactt gcgcctcgct tctcgcctcg acgccgtcgt ttcgcgcctc     300
     192 gatactcaag ctaagatgca aaccatcgga aaatcgatgg gatcaattgt taaatcgctt     360
     193 gagtcgtctt tgaataccgg taatttgcag aagatgtcgg agacaatgga caattttgag     420
     194 aagcaatttg ttaatatgga agttcaggct gagtttatgg agagttctat ggctgggagt     480
     195 acttcgcttt cgactcccga aaccgaggtt aatagtttga tgcagcaggt ggcggatgat     540
     196 tatggccttg aggtttctgt gggtttgcct caggctgctg acatgctat tcctgttccg     600
     197 aaggcggcgg agaaggttga tgaggatgat cttaccagga ggctcgccga gctcaaggct     660
     198 cgaggttgaa gtcaaaggta aaaaggttaa ggttttattg ataatgttgt atagattatg     720
     199 agctttactg atgatcaacc cttcgtgata tgggggtttg atgataattt gctctatatt     780
     200 atggagattt ggagcttttg gaaccgataa ctgtggatgg tttaattatg tattatattg     840
     201 tatttgtcta ttggaaaaaa aaaaaaaaaa aaaactcgag ggggggcccg gtaccaagat     900
     202 ggcctttggt gggttgaaga aggaaaaaga cagaaacgac ttaattacct acttgaaaaa     960
     203 agcctgtgag taaacaggcc ccttttcctt tgtcgatatc ntgtaattag ttagggggt    1019
205 <210> SEQ ID NO: 6
206 <211> LENGTH: 204
207 <212> TYPE: PRT
208 <213> ORGANISM: Beta vulgaris
210 <400> SEQUENCE: 6
211 Met Gly Asn Thr Glu Lys Leu Met Asn Gln Ile Met Glu Leu Lys Phe
212 1               5                   10                  15
214 Thr Ser Lys Ser Leu Gln Arg Gln Ser Arg Lys Cys Glu Lys Glu Glu
215             20                  25                  30
217 Lys Ala Glu Lys Leu Lys Val Lys Lys Ala Ile Glu Lys Gly Asn Met
218         35                  40                  45
220 Asp Gly Ala Arg Ile Tyr Ala Glu Asn Ala Ile Arg Lys Arg Thr Glu
221     50                  55                  60
223 Gln Met Asn Tyr Leu Arg Leu Ala Ser Arg Leu Asp Ala Val Val Ser
224 65                  70                  75                  80
226 Arg Leu Asp Thr Gln Ala Lys Met Gln Thr Ile Gly Lys Ser Met Gly
227             85                  90                  95
229 Ser Ile Val Lys Ser Leu Glu Ser Ser Leu Asn Thr Gly Asn Leu Gln
230             100                 105                 110
232 Lys Met Ser Glu Thr Met Asp Asn Phe Glu Lys Gln Phe Val Asn Met
233         115                 120                 125
235 Glu Val Gln Ala Glu Phe Met Glu Ser Ser Met Ala Gly Ser Thr Ser
236     130                 135                 140
238 Leu Ser Thr Pro Glu Thr Glu Val Asn Ser Leu Met Gln Gln Val Ala
239 145                 150                 155                 160
241 Asp Asp Tyr Gly Leu Glu Val Ser Val Gly Leu Pro Gln Ala Ala Gly
242             165                 170                 175
244 His Ala Ile Pro Val Pro Lys Ala Ala Glu Lys Val Asp Glu Asp Asp
245             180                 185                 190
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RAW SEQUENCE LISTING   DATE: 10/24/2005
PATENT APPLICATION: US/10/552,686   TIME: 10:48:44

Input Set : A:\Sequence Listing.txt
Output Set: N:\CRF4\10242005\J552686.raw

```
247 Leu Thr Arg Arg Leu Ala Glu Leu Lys Ala Arg Gly
248          195                 200
250 <210> SEQ ID NO: 7
251 <211> LENGTH: 1510
252 <212> TYPE: DNA
253 <213> ORGANISM: Beta vulgaris
255 <220> FEATURE:
256 <221> NAME/KEY: misc_feature
257 <222> LOCATION: (2)..(3)
258 <223> OTHER INFORMATION: n is a, c, g, or t
260 <400> SEQUENCE: 7
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262 agatcaccca tggcggaaga aacccataag ccagaatcaa cggtggctga agtggtggtt   120
263 ccagtagccg agaaaccagc tgagaagcca gctgagaagg cagttctacc acctgaagct   180
264 gagaaactag ctgcagctga atcagctgaa gccgagaagc cagctgattc agccgaggct   240
265 aagatagctc aacaagtctc attcaaagag gagactaatg ttgcaagtga gctacctgag   300
266 ctacatagaa aggctctcga ggacttgaag aaacttattc aagaagccct cgagaagcac   360
267 gagttctctt ctcctcctcc tccgcctccg cctgctccag ctaaagttga ggagaaggcg   420
268 gaagagaaga aagaggaaca acctccatcc accacctcca ccaccaccac caccaccacc   480
269 gcggtttcag atgaggttgc tgttgctcct ccatccgaag aggccccgaa aactgacgag   540
270 gcctctccga aagtggagga ggagcctgca aaaatagttg agcaaccacc tacaacaccg   600
271 gcagaagaac ctgaaccagc aaaaacacct gaggttgttg ttgctgaaga ggagaaaact   660
272 ggtgaggata ttaaagaaac tatagtagtc gaggttgcga caactacagc agcaccagta   720
273 ctaacagaac cagaatctgt tgaggagaca ccaaaagaag ctgaagttgt agtggaagaa   780
274 tcaccaaagg agccagaaga agtatcaata tggggaattc cacttcttgc tgatgaaaga   840
275 agtgatgtaa ttctattgaa attcttaaga gcaagagatt atagagtgaa agatgctttc   900
276 actatgatta gaaatactgc tcgttggaga aaagaatttg aggttgattc tttacttgat   960
277 gaagatcttg gaaatgatta tgagaaagtt gtttttacac atggagttga taaacaaggt  1020
278 cgtcctgttt gttataatgt gtttggagag tttcaaaata aggaacttta tcagaatact  1080
279 ttctctgatg cagaaaaaag gaaaaagttc ttgagatggt tgattcaatt ccttgaaaaa  1140
280 actattagaa ctcttgattt tagtcctgaa ggaattaatt cttttgttct tgttaatgat  1200
281 ttgaagaatt ctcctgggta tggtaagaga gatctttaca aagttattga caagtttctt  1260
282 gagattctcc aggataatta cccagaattt gctgctaaac agttgtgcat caatgtttca  1320
283 tggtggtctt ggcatacaac tggatctatt tgactgtatt tacaccaagg agcaagagca  1380
284 agtttgtgtt tgcaagccca tctaaaactg ctgagaccct tttcaagtac atagctcctg  1440
285 agcaggtgcc tgttcaattt ggtgggcaca gcaagtttgg cgagcatgag ttttcccctg  1500
286 ctgatactgt                                                         1510
288 <210> SEQ ID NO: 8
289 <211> LENGTH: 427
290 <212> TYPE: PRT
291 <213> ORGANISM: Beta vulgaris
293 <400> SEQUENCE: 8
294 Met Ala Glu Glu Thr His Lys Pro Glu Ser Thr Val Ala Glu Val Val
295 1               5                  10                  15
297 Val Pro Val Ala Glu Lys Pro Ala Glu Lys Pro Ala Glu Lys Ala Val
298               20                  25                  30
300 Leu Pro Pro Glu Ala Glu Lys Leu Ala Ala Ala Glu Ser Ala Glu Ala
301          35                  40                  45
303 Glu Lys Pro Ala Asp Ser Ala Glu Ala Lys Ile Ala Gln Gln Val Ser
```

RAW SEQUENCE LISTING ERROR SUMMARY   DATE: 10/24/2005
PATENT APPLICATION: **US/10/552,686**   TIME: 10:48:45

Input Set : **A:\Sequence Listing.txt**
Output Set: **N:\CRF4\10242005\J552686.raw**

Please Note:
Use of n and/or Xaa have been detected in the Sequence Listing. Please review the
Sequence Listing to ensure that a corresponding explanation is presented in the <220>
to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:1; N Pos. 3
Seq#:3; N Pos. 934
Seq#:5; N Pos. 5,1001
Seq#:7; N Pos. 2,3
Seq#:9; N Pos. 2049

VERIFICATION SUMMARY   DATE: 10/24/2005
PATENT APPLICATION: **US/10/552,686**   TIME: 10:48:45

Input Set : **A:\Sequence Listing.txt**
Output Set: **N:\CRF4\10242005\J552686.raw**

L:9 M:270 C: Current Application Number differs, Replaced Current Application No
L:9 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:28 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:0
L:126 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:900
L:187 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5 after pos.:0
M:341 Repeated in SeqNo=5
L:261 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7 after pos.:0
L:420 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9 after pos.:2040